

BLADDER CANCER

Inequalities in bladder cancer survival

Two studies, published in *Cancer*, highlight some of the key challenges in improving the care of patients with bladder cancer that might ultimately help to reduce mortality from this disease. Researchers from the University of Rochester, NY report that not all of the differences in bladder cancer survival can be attributed to disease characteristics at diagnosis.

Scosyrev *et al.* have investigated the extent to which bladder cancer mortality differs between sexes and across ethnic groups, and what factors might contribute to these disparities. Men are three times more likely than women to develop bladder cancer, yet women are more likely to die from their disease. Bladder cancer incidence is twice as high in white populations as in African American populations; however, once diagnosed, African American patients are more likely to die from the disease than are their white counterparts.

The researchers examined data from over 100,000 patients in the Surveillance, Epidemiology and End Results (SEER) database who were diagnosed with bladder cancer between 1990 and 2003. Muscle-invasive disease was more common in women than in men (of both ethnicities), and also in African American men and women compared with their white counterparts.

Four separate models demonstrated that in the first year following diagnosis, women are around 80–114% more likely than men to die from their cancer. Similarly, African American patients are 73–103% more likely to die in the first 2 years of follow-up compared with their white counterparts. These observed excess hazards of death decrease with time, and are no longer apparent after 3 years of follow-up. Such disparities can be explained in part by differences in tumor stage at presentation; however, “if one accounts for these worse tumor characteristics, while much of the excess bladder cancer mortality in African



Americans compared with whites can be explained, this is not the case for women compared with men,” says Edward Messing, corresponding author on the paper. “Other factors, including selection and tolerance of therapies, and perhaps biological differences between the sexes, might play important roles.”

The results demonstrate that factors other than known prognostic indicators contribute to the worse outcomes observed in women and African American patients with bladder cancer. “To equalize disease-specific mortality between the sexes simply by paying more attention to diagnosing and evaluating symptoms such as hematuria earlier in women, while important, is not likely, on its own, to reduce mortality to a man’s rate,” says Messing.

Scosyrev and colleagues suggest treatment choice as one of the factors that might contribute to differences in bladder cancer mortality—a view that is confirmed in a separate study by Morris *et al.* at the University of Michigan.

Using clinical data from patients treated at their institution between 2001 and 2005, and SEER data on newly diagnosed bladder cancer, Morris *et al.*

conclude that 31–46% of deaths from bladder cancer could have been avoided. They state that only around 68% of patients were considered to have received “timely and appropriate therapy for their bladder cancer,” according to the prognostic factors at presentation and available therapies.

Although patient preferences for particular treatments were not accounted for in their analyses, the authors state that “alterations in [the] physician decision-making process are warranted,” and suggest that cystectomy should be used at an earlier stage in treatment and that the risks associated with conservative therapies need to be better understood. This study “serves as a call to arms,” says Badrinath Konety, Vice Chair of Urology, University of California, San Francisco, in his accompanying editorial (*Cancer* 115, 914–917). “Earlier cystectomy or other aggressive therapy can save the lives of some patients with non-muscle-invasive disease.”

These two studies raise important issues surrounding the diagnosis and treatment of bladder cancer. In their editorial discussing the findings of Scosyrev and colleagues (*Cancer* 115, 10–12), Mark Katz and Gary Steinberg from the University of Chicago Medical Center highlight the importance of being able to assess the quality of care given to bladder cancer patients. “Without a measurement tool,” they write, “it will be more difficult to narrow the gap in racial and sex disparity.” Assessing quality of care in this way might help to address the problems highlighted by both studies—namely, the issues surrounding bladder cancer diagnosis and treatment choice.

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Original articles Scosyrev, E. *et al.* Sex and racial differences in bladder cancer presentation and mortality in the US. *Cancer* 115, 68–74 (2009).

Morris, D. S. *et al.* Understanding bladder cancer death: tumor biology versus physician practice. *Cancer* 115, 1011–1020 (2009).